

## USING AND DESIGNING WEBQUESTS

A WebQuest is an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet. There are at least two levels of WebQuests that should be distinguished from one another.

### Short Term WebQuests

The instructional goal of a short term WebQuest is knowledge acquisition and integration. At the end of a short term WebQuest, a learner will have grappled with a significant amount of new information and made sense of it. A short term WebQuest is designed to be completed in one to three class periods.

### Long Term WebQuests

The instructional goal of a longer term WebQuest is extending and refining knowledge. After completing a longer term WebQuest, a learner would have analyzed a body of knowledge deeply, transformed it in some way, and demonstrated an understanding of the material by creating something that others can respond to, on-line or off. A longer term WebQuest will typically take between one week and a month in a classroom setting.

### Critical Attributes

WebQuests are deliberately designed to make the best use of a learner's time. There is questionable benefit in having learners surfing the net without a clear task in mind, and most schools must ration student connect time severely. To achieve that efficiency and clarity of purpose, WebQuests should contain at least the following parts:

- **Introduction:** sets the stage and provides the learner with some background information.
- **Task:** should be doable and interesting.
- **Information sources:** those that are needed to complete the task. Many, although not necessarily all, of the resources should be part of the WebQuest. These might include web documents, experts available via e-mail or real-time conferencing, searchable databases on the net, and books and other documents physically available in the learner's setting.
- **Process:** a description of which should tell the learners what to do to accomplish their task. The process should be broken into clearly described, numbered steps.
- **Learning advice:** on how to organize the information acquired. This can be a series of questions or directions to complete organizational frameworks such as timelines, concept maps or cause-and-effect diagrams.
- **Teacher advice:** if you plan to post your WebQuest on the internet where other teachers may find and choose to use it in their own classes, a teacher advice section is an essential part of the WebQuest. You can provide tips and strategies for using the project, pedagogies that work in your class in support of the WebQuest, topic lists and even a history of why you chose to write the WebQuest as you did.
- **Conclusion:** should bring closure to the quest, reminding the learners about what they've learned and perhaps encourages them to extend the experience into other domains.

### Non-Critical Attributes for WebQuests

Group activities: WebQuests are most likely to be designed to take advantage of group activities. They may also be designed as solo quests.

Motivational elements: WebQuests can be enhanced with role playing activities, simulated personae or scenarios to work within. Ex: you've been asked by the Secretary General of the UN to brief him on what's happening in sub-Saharan Africa this week...

Interdisciplinary: these are more difficult to design well when including more than one discipline. You may want to become well versed in writing a good single discipline WebQuest before attempting an interdisciplinary quest.

### **Design Steps**

Learning to design WebQuests is a process that should go from the simple and familiar to the more complex and new. That means starting within a single discipline and a short-term WebQuest and then moving up to longer and more interdisciplinary activities.

**Step 1:** the first stage for a teacher in learning to be a WebQuest designer is to become familiar with the resources available on-line in their own content area.

- Your favorite search engine (Bing, Google, Yahoo...) Use the word 'WebQuest' and content.
- <http://webquest.sdsu.edu/searching/fournets.htm> - an on-line tutorial that teaches you how to narrow your search for the perfect website.

**Step 2:** organize one's knowledge of what's out there. Spending a few hours organizing your resources into categories like searchable database, reference material, project ideas, etc. is never a waste of time.

**Step 3:** identify topics that fit in with your curriculum and for which there are appropriate materials on-line. An extremely valuable resource is your textbook's chapter review sections. These often times include "Further Knowledge" or "Extending the Classroom" style questions and project ideas. Many textbooks also have on-line resource lists in support of individual chapters.

**Step 4:** a template is available that guides you through the process of creating a short-term, single discipline WebQuest. The template is available on the WebQuest Page at this address:  
<http://webquest.sdsu.edu/LessonTemplate.html>

### **Websites You Should Know About**

- **The WebQuest Page** – Bernie Dodge's page at San Diego State University. The guru of WebQuests. <http://www.webquest.org>. At this site, you will find WebQuests that were developed by others and links to self-help pages and workshops to assist you.
- **RubiStar** – let's you design rubrics for all sorts of projects from posters to PowerPoint, research papers and interviews. <http://rubistar.4teachers.org/>
- **Flaming Text.com** – site that allows you to design headline and section clipart free of charge. Use it for any projects, not just webquests. <http://www.flamingtext.com/>
- **GRSites.com** – another free site with literally thousands of graphics and backgrounds. Don't design a webpage without it! <http://grsites.com/>

### **Getting Started – the WebQuest Birthing Process**

- Begin with a project that you have used in a class before. Take advantage of projects used by teachers in other disciplines. Learn what they are doing and adapt what you can.
- Use the KISS Principle (Keep It Simple, Sweetie!) Design your first WebQuest so your students can complete the project, you can grade it in a reasonable period of time and ask/look for ways to improve the work done and expected.
- I like to make the first set of students working on a new webquest my guinea pig class.
  - They help me to decide if the project is reasonable (time constraints, expectations, etc.)
  - Students also suggest realistic changes to be made to the project from start to finish, helping me to edit all aspects of the project.

- Offer bonus points to students who find usable sites that you can add to your webquest.
- I post all webquests on my web page so students can access the project from home. Design the page with color and graphics, interesting fonts and links for ease of navigating through the page.
- Thanks to some wrestling with the alphabet, the five guiding principles can be captured in the word FOCUS:
  - **F**ind great sites.
  - **O**rchestrate your learners and resources.
  - **C**hallenge your learners to think.
  - **U**se the medium.
  - **S**caffold high expectations.

### **Sample Webquest (Used with Permission from Webquest.org)**

Objective: You are to construct a booklet that will describe the life cycle of a typical, one solar mass star. You are to include at least one diagram per page with **no more than 25 words** to describe the diagram. You should include all stages of the star's life history with special emphasis on the structure of the star when it is a main sequence star. Some things to be sure you include, in no particular order:

collapse	giant	nova
color	gravity	photosphere
core	helium	prominence
corona	H-R diagram	solar wind
dwarf	hydrogen	sunspot
elements	main sequence	surface temperature
fusion	nebula	

The booklet's size should be equal to a standard piece of typing paper folded in half (hamburger fold).

1. The booklet should be illustrated in color.
2. The booklet should include a glossary of terms with their definitions. No definition should exceed the 25 word limit, although the glossary pages can have more than 25 words each.
3. Works consulted page of sites and resources used.

Due date is Friday, April 11

### **Grading and Scoring**

In order to increase buy-in for a project-based activity, students should assist in designing the grading rubric. In this way, students know the amount of work they have put into the different aspects of the project and can more accurately gauge the importance and relative weight of these parts. If you have never designed a grading rubric, take a look at RubiStar (<http://rubistar.4teachers.org/>). It's worth spreading to other teachers in your building/department.

From Webquest.org, here is a sample rubric that encompasses many of the elements contained in a polished WebQuest.

	Beginning	Developing	Accomplished	Score
<b>OVERALL AESTHETICS</b> (This refers to the WebQuest page itself, not the external resources linked to it.)				
<b>Overall Visual Appeal</b>	0 points There are few or no graphic elements. No variation in layout or typography. OR Color is garish and/or typographic variations are overused and legibility suffers. Background interferes with the readability.	2 points Graphic elements sometimes, but not always, contribute to the understanding of concepts, ideas and relationships. There is some variation in type size, color, and layout.	4 points Appropriate and thematic graphic elements are used to make visual connections that contribute to the understanding of concepts, ideas and relationships. Differences in type size and/or color are used well and consistently. See <a href="#">Fine Points Checklist</a> .	
<b>Navigation &amp; Flow</b>	0 points Getting through the lesson is confusing and unconventional. Pages can't be found easily and/or the way back isn't clear.	2 points There are a few places where the learner can get lost and not know where to go next.	4 points Navigation is seamless. It is always clear to the learner what all the pieces are and how to get to them.	
<b>Mechanical Aspects</b>	0 points There are more than 5 broken links, misplaced or missing images, badly sized tables, misspellings and/or grammatical errors.	1 point There are some broken links, misplaced or missing images, badly sized tables, misspellings and/or grammatical errors.	2 points No mechanical problems noted. See <a href="#">Fine Points Checklist</a> .	
<b>INTRODUCTION</b>				
<b>Motivational Effectiveness of Introduction</b>	0 points The introduction is purely factual, with no appeal to relevance or social importance OR The scenario posed is transparently bogus and doesn't respect the media literacy of today's learners.	1 point The introduction relates somewhat to the learner's interests and/or describes a compelling question or problem.	2 points The introduction draws the reader into the lesson by relating to the learner's interests or goals and/or engagingly describing a compelling question or problem.	
<b>Cognitive Effectiveness of the Introduction</b>	0 points The introduction doesn't prepare the reader for what is to come, or build on what the learner already knows.	1 point The introduction makes some reference to learner's prior knowledge and previews to some extent what the lesson is about.	2 points The introduction builds on learner's prior knowledge and effectively prepares the learner by foreshadowing what the lesson is about.	
<b>Task</b> (The task is the end result of student efforts... not the steps involved in getting there.)				
<b>Connection of Task to Standards</b>	0 points The task is not related to standards.	2 point The task is referenced to standards but is not clearly connected to what students must know and be able to do to achieve proficiency of those standards.	4 points The task is referenced to standards and is clearly connected to what students must know and be able to do to achieve proficiency of those standards.	
<b>Cognitive Level of the Task</b>	0 points Task requires simply comprehending or retelling of information found on web pages and answering factual questions.	3 points Task is doable but is limited in its significance to students' lives. The task requires analysis of information and/or putting together information from several sources.	6 points Task is doable and engaging, and elicits thinking that goes beyond rote comprehension. The task requires synthesis of multiple sources of information, and/or taking a position, and/or going beyond the data given and making a generalization or creative product. See <a href="#">WebQuest Taskonomy</a> .	
<b>PROCESS</b> (The process is the step-by-step description of how students will accomplish the task.)				
<b>Clarity of Process</b>	0 points Process is not clearly stated. Students would not know exactly what they were supposed to do just from reading this.	2 points Some directions are given, but there is missing information. Students might be confused.	4 points Every step is clearly stated. Most students would know exactly where they are at each step of the process and know what to do next.	

<b>Scaffolding of Process</b>	0 points The process lacks strategies and organizational tools needed for students to gain the knowledge needed to complete the task.  Activities are of little significance to one another and/or to the accomplishment of the task.	3 points Strategies and organizational tools embedded in the process are insufficient to ensure that all students will gain the knowledge needed to complete the task.  Some of the activities do not relate specifically to the accomplishment of the task.	6 points The process provides students coming in at different entry levels with strategies and organizational tools to access and gain the knowledge needed to complete the task.  Activities are clearly related and designed to take the students from basic knowledge to higher level thinking.  Checks for understanding are built in to assess whether students are getting it.	
<b>Richness of Process</b>	0 points Few steps, no separate roles assigned.	1 points Some separate tasks or roles assigned. More complex activities required.	2 points Different roles are assigned to help students understand different perspectives and/or share responsibility in accomplishing the task.	
<b>RESOURCES</b> (Note: you should evaluate all resources linked to the page, even if they are in sections other than the Process block. Also note that books, video and other off-line resources can and should be used where appropriate.)				
<b>Relevance &amp; Quantity of Resources</b>	0 points Resources provided are not sufficient for students to accomplish the task.  OR There are too many resources for learners to look at in a reasonable time.	2 point There is some connection between the resources and the information needed for students to accomplish the task. Some resources don't add anything new.	4 points There is a clear and meaningful connection between all the resources and the information needed for students to accomplish the task. Every resource carries its weight.	
<b>Quality of Resources</b>	0 points Links are mundane. They lead to information that could be found in a classroom encyclopedia.	2 points Some links carry information not ordinarily found in a classroom.	4 points Links make excellent use of the Web's timeliness and colorfulness.  Varied resources provide enough meaningful information for students to think deeply.	
<b>EVALUATION</b>				
<b>Clarity of Evaluation Criteria</b>	0 points  Criteria for success are not described.	3 points  Criteria for success are at least partially described.	6 points  Criteria for success are clearly stated in the form of a rubric. Criteria include qualitative as well as quantitative descriptors.  The evaluation instrument clearly measures what students must know and be able to do to accomplish the task.  See <a href="#">Creating a Rubric</a> .	
<b>TOTAL SCORE</b>				

**Additional Notes:**